

CLAIMS

We claim:

1. An ablation catheter comprising:

a tubular body associated with an ablation fluid supply lumen;

at least one manifold defining at least one ablation fluid flow path out of the ablation fluid supply lumen, the at least one manifold comprising:

at least one inlet port in fluid communication with the ablation fluid supply lumen;

at least one outlet port in fluid communication with the at least one inlet port, the at least one output port having a larger dimension than the at least one inlet port; and

an electrode positioned in the at least one ablation fluid flow path.

2. The ablation catheter of claim 1 wherein the at least one manifold defines a longitudinal axis, and wherein the at least one inlet port is arranged generally parallel with the longitudinal axis of the manifold.

3. The ablation catheter of claim 1 wherein the at least one manifold defines a longitudinal axis, and wherein at least one inlet port is arranged at an angle with respect to the longitudinal axis of the manifold.

4. The ablation catheter of claim 1 wherein the at least one inlet port is arranged to provide a swirling motion of an ablation fluid flowing into the at least one manifold from the ablation fluid supply lumen.

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5. The ablation catheter of claim 1 wherein the at least one inlet port defines a circle having a diameter of about 0.002 inches, and wherein the at least one outlet port defines a circle having a diameter of about 0.02 to about 0.025 inches.

6. The ablation catheter of claim 1 wherein the electrode is housed in an electrode lumen.

7. The ablation catheter of claim 5 wherein the electrode lumen is in communication with the at least one output port.

8. The ablation catheter of claim 1 wherein the manifold further comprises at least one channel in fluid communication with the at least one output port.

9. The ablation catheter of claim 7 wherein the channel is defined in the tubular body of the catheter.

10. The ablation catheter of claim 1 wherein the catheter further comprises a shaping element, and wherein the manifold is defined in the shaping element.

11. The ablation catheter of claim 1 wherein:
the tubular body includes a distal end region defining at least a partial loop;
the at least one manifold includes a plurality of manifolds along at least a portion of the at least a partial loop; and
the plurality of manifolds are adapted to distribute ablation fluid within the ablation fluid supply lumen to the plurality of manifolds along the at least partial loop.

12. An ablation catheter comprising:

a tubular body defining an arcuate section;
a lumen operably connected with the tubular body; and

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manifolding means for conveying fluid from within the lumen to without the tubular body.